WHAT IS CLAIMED IS:

1. A voltage regulator comprising:

an output stage having an input and an output, the output operable to provide a regulated output signal;

a first stage having a first input, a second input, and an output, the first input operable to receive a signal reference voltage, the second input operable to receive a compensated signal derived from the regulated output signal, and the output operable to generate a first-stage output signal based at least in part on the first and second inputs;

a second stage having an input and an output, the input operable to receive the first-stage output signal and the output operable to generate a second-stage output signal received at the input of the output stage;

a voltage divider coupled to the output stage output, the voltage divider having at least two circuit elements in series and forming a compensated output at the circuit node between the at least two circuit elements, whereby the compensated signal derived from the output signal is generated at the circuit node;

a first compensation unit coupled between the first-stage output and the output-stage output; and

a second compensation unit coupled in parallel with one of the circuit elements of the voltage divider.

2. A voltage regulator according to claim 1, wherein the first compensation unit is operable to provide frequency compensation.

3. A voltage regulator according of claim 1, wherein the second compensation unit is operable to provide frequency compensation.

4. A voltage regulator according to claim 1, further comprising a load capacitor coupled to the output of the output stage.

5. A voltage regulator according to claim 4, further comprising a resistor series-coupled with the load capacitor.

6. A voltage regulator according to claim 1, further comprising a load coupled to the output of the output stage, the load receiving current through the output stage.

7. A voltage regulator according to claim l, wherein the first compensation unit comprises at least one capacitor.

8. A voltage regulator according to claim 7, further comprising at least one resistor in series with the at least one capacitor.

9. A voltage regulator according to claim 1, wherein the second compensation unit comprises at least one capacitor.

10. A voltage regulator according to claim 1, wherein the output stage comprises at least one metal-oxide semiconductor transistor.

11. A voltage regulator according to claim 10, wherein the at least one metal-oxide semiconductor transistor is a P-type transistor.

12. A voltage regulator according to claim 1, wherein the first stage is a transconductance stage.

13. A voltage regulator according to claim 1, wherein the first compensation unit comprises a variable circuit element

14. A voltage regulator according to claim 13, wherein the variable circuit element is a variable capacitor.

15. A voltage regulator according to claim 13, wherein the variable circuit element is a variable resistor.

16. A voltage regulator according to claim 1, wherein the second compensation unit comprises a variable circuit element.

17. A voltage regulator according to claim 16, wherein the variable circuit element is a variable capacitor.

18. A voltage regulator of claim 1, wherein the voltage regulator is a low drop-out voltage regulator.

19. A voltage regulator according to claim 1, and further comprising an additional stage in series with the first and second stages.

20. A voltage regulator according to claim 1, wherein the output stage comprises at least one bipolar semiconductor transistor.

21. A voltage regulator according to claim 20, wherein the bipolar transistor is a PNP transistor.